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KNOBBE MARTENS OLSON & BEAR LLP  
2040 MAIN STREET  
FOURTEENTH FLOOR  
IRVINE, CA 92614

EXAMINER

HERNANDEZ, OLGA

ART UNIT PAPER NUMBER

2144

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/057,842

**Applicant(s)**

KAZEMI ET AL.

**Examiner**

Olga Hernandez

**Art Unit**

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 72502.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 11, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hu (6,173,322).

As per claims 1 and 11, Hu discloses a first data storage resource; at least one client device configured to request data from the first data storage resource; a first server *capable of* accessing the first data storage resource; a second server *capable of* accessing the first data storage resource; and dynamic session redirector circuitry in communication with at least one client device via a stateful protocol and in communication with both the first server and the second server, wherein the dynamic session redirector circuitry is configured to access the first data storage resource in response to the request from the at least one client device, the dynamic session redirector circuitry configured to access the first data storage resource through either the first server *or* the second server, the dynamic session redirector determining which server through which to access the resource based upon the operational status of the

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first and second servers (figures 9a, 13, column 4, lines 9-12, column 5, lines 34-47, column 6, lines 11-29, column 7, lines 55-57, column 11, lines 5-35).

As per claim 2, Hu discloses the operational status comprises a failure status of any of the servers (column 11, lines 60-65).

As per claim 14, Hu discloses receiving a request for access to one of the plurality of storage resources (abstract); looking up an association between the one of the storage resources and a plurality of servers for accessing the plurality of storage resources (column 4, lines 13-32, column 8, lines 39-50 and figure 10); sending a first request to a first of the plurality of servers for accessing the one of the storage resources (figure 9a); sending a second request to a second of the plurality of servers for accessing the one of the storage resources (figure 9a); receiving a first response from the first server; receiving a second response from the second server (column 11, lines 17-35); determining the load on at least one of the plurality of servers due to the plurality of storage resources (column 9, lines 7-14); and assigning new associations between the plurality of storage resources and the plurality of servers based upon the load on at least one of the plurality of storage resources (column 4, lines 9-12, column 5, lines 34-47, column 6, lines 11-29, column 7, lines 55-57, column 11, lines 5-35).

Claims 1 and 11, are rejected under 35 U.S.C. 102(e) as being anticipated by Pistriotto et al (6,138,162).

As per claims 1 and 11, Pistriotto discloses a first data storage resource; at least one client device configured to request data from the first data storage resource; a first

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server capable of accessing the first data storage resource; a second server *capable of* accessing the first data storage resource; and dynamic session redirector circuitry in communication with at least one client device via a stateful protocol and in communication with both the first server and the second server, wherein the dynamic session redirector circuitry is configured to access the first data storage resource in response to the request from the at least one client device, the dynamic session redirector circuitry configured to access the first data storage resource through either the first server *or* the second server, the dynamic session redirector determining which server through which to access the resource based upon the operational status of the first and second servers (figures 2, 4, column 7, lines 29-67, column 8, lines 1-44, column 9, lines 15-40).

Claims 1, 4, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Colby et al (6,006,264).

As per claims 1 and 11, Colby discloses a first data storage resource; at least one client device configured to request data from the first data storage resource; a first server capable of accessing the first data storage resource; a second server *capable of* accessing the first data storage resource; and dynamic session redirector circuitry in communication with at least one client device via a stateful protocol and in communication with both the first server and the second server, wherein the dynamic session redirector circuitry is configured to access the first data storage resource in response to the request from the at least one client device, the dynamic session redirector circuitry configured to access the first data storage resource through either

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the first server *or* the second server, the dynamic session redirector determining which server through which to access the resource based upon the operational status of the first and second servers (figures 1a, 1b, 1c, 8, 9, 17, 21a, 21b, 22, column 5, lines 45-51, column 6, lines 53-56).

As per claim 4, Colby discloses the operational status comprises a processing load being handled by the first and second servers (column 6, lines 53-56).

Claims 1, 3, 5-8, 11-13 and 15, are rejected under 35 U.S.C. 102(e) as being anticipated by Naredran et al (6,070,191).

As per claims 1 and 11, Naredran discloses a first data storage resource; at least one client device configured to request data from the first data storage resource; a first server capable of accessing the first data storage resource; a second server *capable of* accessing the first data storage resource; and dynamic session redirector circuitry in communication with at least one client device via a stateful protocol and in communication with both the first server and the second server, wherein the dynamic session redirector circuitry is configured to access the first data storage resource in response to the request from the at least one client device, the dynamic session redirector circuitry configured to access the first data storage resource through either the first server *or* the second server, the dynamic session redirector determining which server through which to access the resource based upon the operational status of the first and second servers (figures 1-6, column 4, lines 5-15, 30-35, column 6, lines 24-27).

As per claim 3, Naredran discloses the operational status comprises a prediction/probability of the expected load for the first and second servers (column 6, lines 24-27, column 10, lines 46-49).

As per claim 5, Naredran discloses the operational status comprises a measure of the memory usage of first and second servers (column 5, lines 4-7).

As per claim 6, Naredran discloses the dynamic session redirector circuitry maintains a table listing the association between the first data storage resource and the server through which the dynamic session redirector circuitry accesses the first data storage resource, and wherein the dynamic session redirector circuitry rewrites the table when the first data storage resource is accessed through a different server (column 13, lines 57-67, column 11, lines 61-67).

As per claim 7, Naredran discloses:

- a first server and a second server (figures 2-6);
- a plurality of data storage resources which are accessible through the first server and the second server; and a dynamic session redirector in communication with at least one client device via a stateful protocol and in communication with both the first server and the second server, wherein the dynamic session redirector sends requests for access to at least one of the plurality of data storage resources in response to a request for access to data storage resources made to the dynamic session redirector by the at least one client device, and wherein the dynamic session redirector further comprises a table mapping at least one of the plurality of data storage resources with one

of the first server and second server, and the dynamic session redirector sends the request for access to the data storage resources to one of the first server and second server based upon the mapping between the data storage resource being accessed and the server listed in the table, and wherein the dynamic session redirector *may* remap any of the plurality of data storage resources with one of either the first server or second server based upon the status of the first and second servers (column 13, lines 57-67, column 11, lines 61-67, figures 1-6, column 4, lines 5-15, 30-35, column 6, lines 24-27).

As per claim 8, Naredran discloses the client is provided with a single system interface including the data storage resources of the first and second server by the dynamic session redirector (abstract).

As per claim 12, Naredran discloses receiving a request for access to one of the plurality of storage resources; looking up an association between the one of the storage resources and one of a plurality of servers for accessing the plurality of storage resources; accessing the one of the storage resources through the one of the plurality of servers; determining the load on at least one of the plurality of servers due to the plurality of storage resources (figures 1-6, column 4, lines 5-15, 30-35, column 6, lines 24-27); and assigning new associations between the plurality of storage resources and the plurality of servers based upon the load on at least one of the plurality of storage resources (column 13, lines 57-67, column 11, lines 61-67).



As per claim 13, Naredran discloses accessing the one of the storage resources further comprises send a first request to the one of the plurality of servers, and sending a second request to a second of the plurality of servers (abstract).

As per claim 15, Naredran discloses maintaining a table of associations between a plurality of data resources and a plurality of servers where at least one of the plurality of data resources is assigned to one of the plurality of servers (abstract and column 12, lines 1-10, column 13, table 2, column 14, table 3 and 4); evaluating the load imposed upon the plurality of servers by the data resources associated with the plurality of servers (column 11, lines 61-67, column 12, lines 1-10); determining whether the load imposed by the plurality of data resources *may be* more evenly distributed among the plurality of servers by altering the associations between the plurality of data resources and the plurality of servers (column 12, lines 27-29, column 14, lines 20-24); and updating the table of associations between the plurality of data resources and the plurality of servers to reflect the more even distribution of load (column 13, lines 57-67, column 11, lines 61-67).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naredran et al (6,070,191).

As per claim 9, Naredran teaches a dynamic session redirector; a plurality of servers connected via a communications network to the dynamic session redirector; a storage area network connected to the one or more servers; one or more controllers connected to the storage area network; and a plurality of data storage resources connected to the one or more controllers, the dynamic session redirector configured to provide a system interface for accessing the plurality of data storage resources to a client connected to the data storage system, the redirector configured to receive requests from a client using a statefull protocol and to provide a first communications session between the client and the redirector in response to a request from the client, the dynamic session redirector sending requests for access to at least one of the plurality of data storage resources in response to the requests from the client, and wherein the dynamic session redirector further comprises a table mapping at least one of the plurality of data storage resources with one of the plurality of servers, and the dynamic session redirector sends the request for access to the data storage resources to one of the plurality of servers based upon the mapping between the data storage resource being accessed and the server listed in the table, and wherein the dynamic session redirector *may* remap any of the plurality of data storage resources to any of the plurality of servers based upon the status of the one or more servers (figures 1-6, column 4, lines 5-15, 30-35, column 6, lines 24-27, column 13, lines 57-67, column 11, lines 61-67).

RAID - An information storage and playback technology which uses several computer disk drives in a carefully-designed, redundant arrangement.<sup>1</sup>

Naredran does not teach the network hub. However, Naredran teaches another type of network, which is functional equivalent as claimed by the applicant (figure 1). Thus it would have been obvious to one skill in the art to substitute applicant's network hub with Naredran's network in order to increase the throughput and scalability of web servers and to decrease the request latency for clients.

As per claim 10, Naredran teaches the redirector is further configured to send a request for access to the data storage resources to a second of the plurality of servers based upon the mapping between the data storage resource being accessed and the server listed in the table (column 14, tables 2, 3, 4).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Hernandez whose telephone number is 571-272-7144. The examiner can normally be reached on Mon-Thu 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 571-272-3925. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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A handwritten signature in black ink, appearing to read 'Olga Hernandez', with a stylized, cursive script.

Olga Hernandez  
Examiner  
Art Unit 2144